What the Giant Carcass Trawled off New Zealand Suggests to an Ichthyologist*

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That the giant carcass trawled by the fishing vessel Zuiyo-maru (2455 t) 30 miles east of Christchurch, New Zealand, on April 25, 1977, represents a giant shark is now believed to be true by some biochemists and biologists. Many people appear to have been disappointed to learn that the carcass seems not to be that of a living fossil and appear to regard the unusual excitement shown by Japanese journalists as ending in much ado about nothing. But the carcass has stimulated the writer's interest in the distribution and differences of ceratotrichia among lower vertebrates. 'Shark-fin'† processors, to a few of whom the writer showed the ceratotrichia of the carcass for identification, are fairly knowledgeable about the difference in the nature of ceratotrichia of every fin of the majority of the sharks and guitarfishes handled at fish markets in Tokyo. At first they identified the ceratotrichia of the carcass with those of a certain shark, and later with those of the basking shark. Thanks to the efforts of some staff members of the Department of Science, the Asahi Press, Tokyo, samples of dried ceratotrichia of the basking shark, *Cetorhinus maximus* (Gunnerus), from a shark-fin processor were made available to the writer for comparison with those from the carcass. The ceratotrichia from these two sources resembled each other remarkably. In the absence of knowledge about ceratotrichia of other giant sharks he is unable to state for certain whether the carcass was that of the basking shark or not. This short note is intended to expedite research into the distribution of ceratotrichia among varied taxa of animals both living and fossil and differences between the fins of a single animal and between species or higher taxa.

As stated by Zangerl (1973, p. 12), cartilaginous fin-rays are present in modern (including Mesozoic) elasmobranchs, but they are often reduced in size and ceratotrichia form the major fin supports regardless of the state of reduction of the cartilage radials. In Palaeozoic elasmobranchs ceratotrichia were considered to be absent except for some xenacanths where they were present in the paired and unpaired fins (Zangerl, 1973, p. 12). It is of interest to see that he (1973, p. 13, pl. 1) described a Pennsylvanian shark, *Trichorhipis praecursor*, as a new genus and new species, based on the presumed pectoral fin which is characterized by the presence of ceratotrichia covering presumed (hidden) radial elements as in modern forms. This suggests the possibility of finding ceratotrichia in other animals both living and fossil.

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† This word is adopted here to denote ceratotrichia of sharks and rhinobatids used for the Chinese shark-fin soup.

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